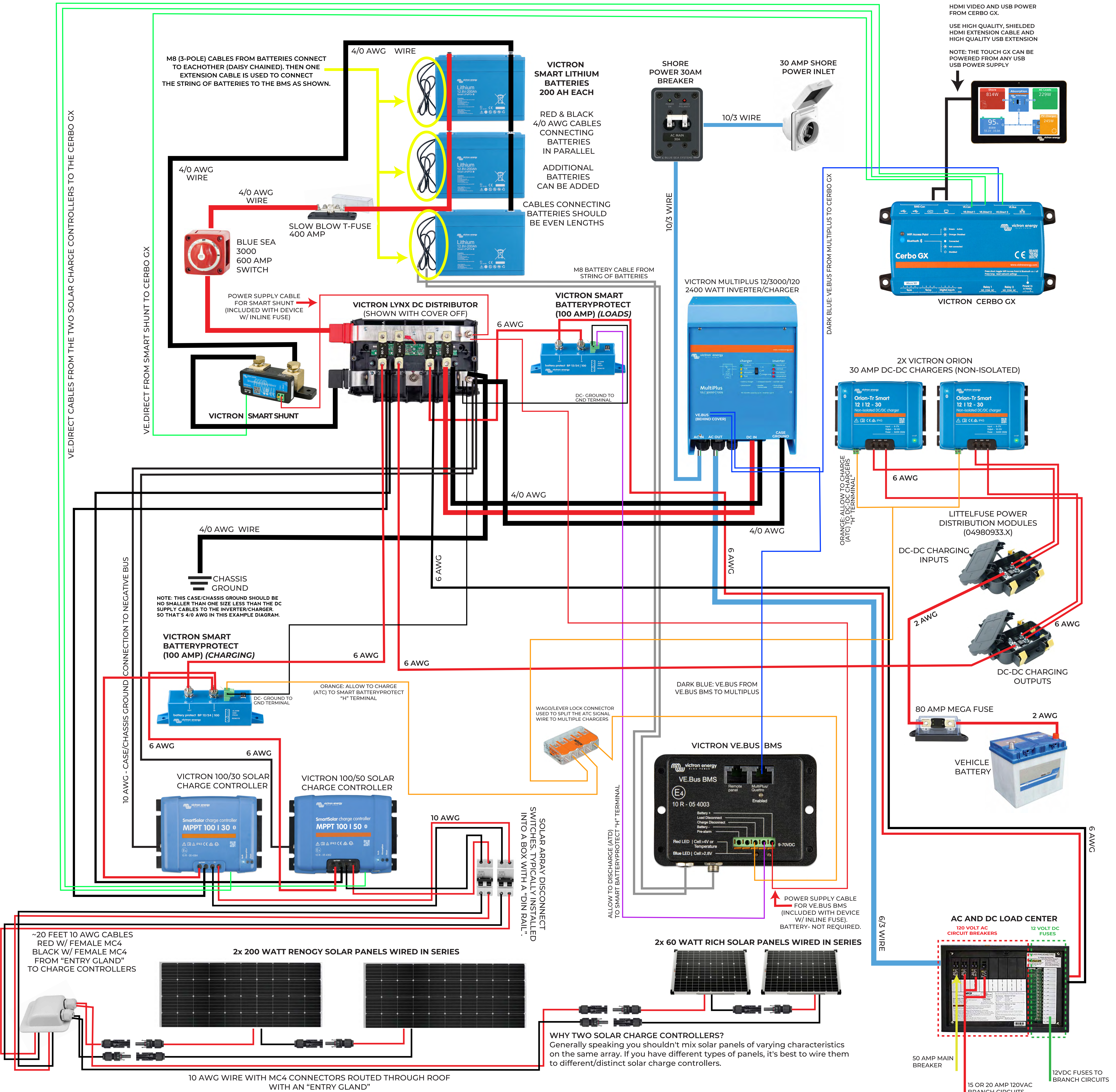




THIS IS NOT ELECTRICAL ADVICE.
THIS IS AN ILLUSTRATION OF ELECTRICAL SYSTEMS THAT WE HAVE USED IN OUR VANS.
ALWAYS DO YOUR OWN RESEARCH AND USE THIS INFORMATION AT YOUR OWN RISK.



VE.DIRECT CABLES FROM THE TWO SOLAR CHARGE CONTROLLERS TO THE CERBO GX

VE.DIRECT FROM SMART SHUNT TO CERBO GX

M8 (3-POLE) CABLES FROM BATTERIES CONNECT TO EACHOTHER (DAISY CHAINED). THEN ONE EXTENSION CABLE IS USED TO CONNECT THE STRING OF BATTERIES TO THE BMS AS SHOWN.

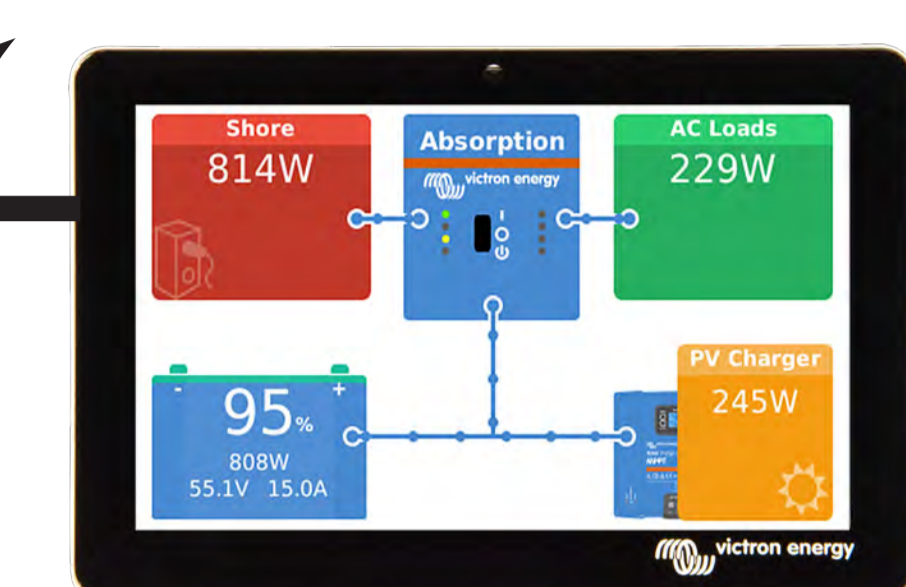
VICTRON SMART LITHIUM BATTERIES 200 AH EACH
RED & BLACK 4/0 AWG CABLES CONNECTING BATTERIES IN PARALLEL
ADDITIONAL BATTERIES CAN BE ADDED
CABLES CONNECTING BATTERIES SHOULD BE EVEN LENGTHS

SHORE POWER 30AMP BREAKER
10/3 WIRE

30 AMP SHORE POWER INLET

HDMI VIDEO AND USB POWER FROM CERBO GX.
USE HIGH QUALITY, SHIELDED HDMI EXTENSION CABLE AND HIGH QUALITY USB EXTENSION

NOTE: THE TOUCH GX CAN BE POWERED FROM ANY USB POWER SUPPLY



VICTRON CERBO GX



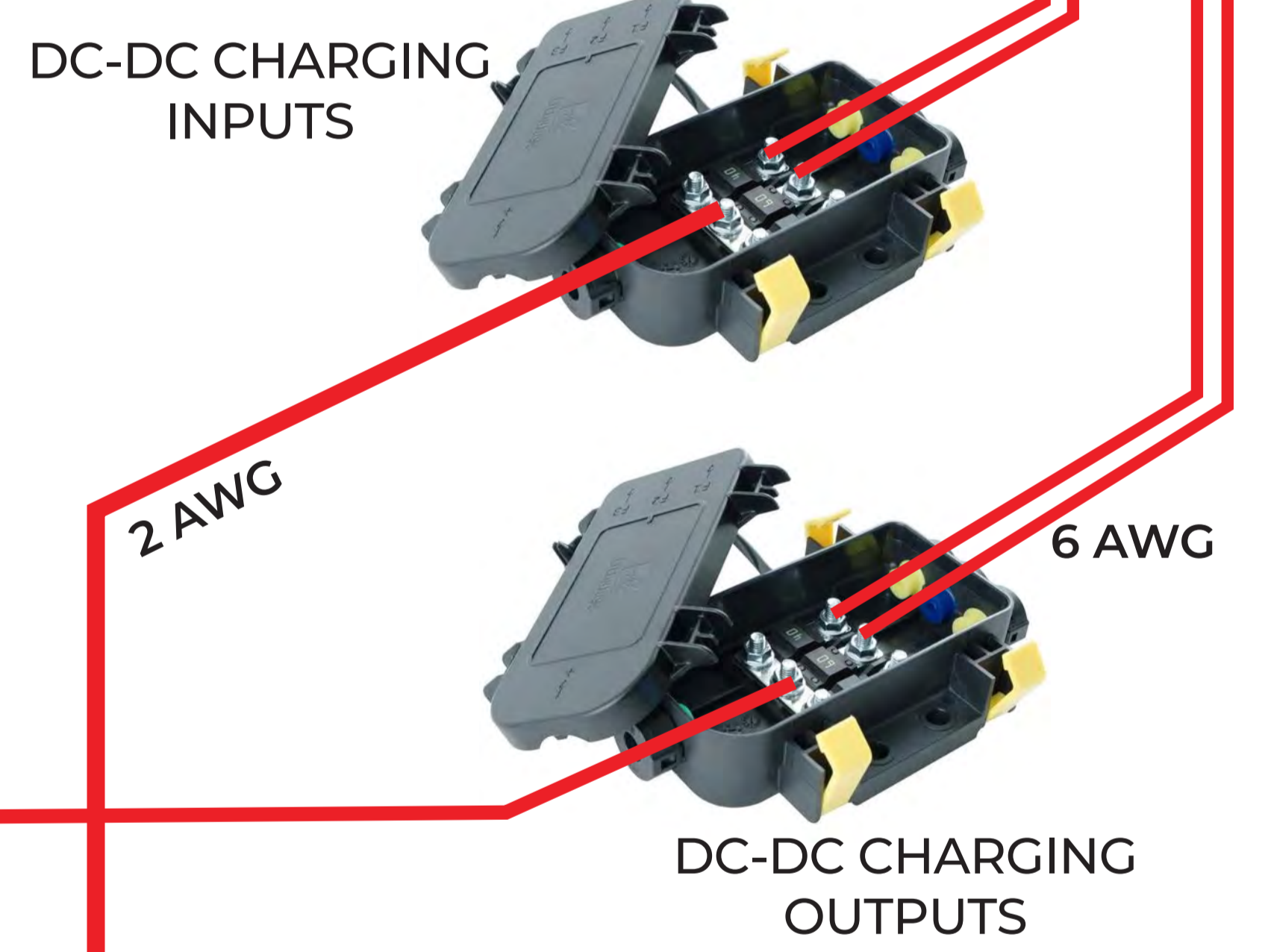
VICTRON MULTIPLUS 12/3000/120 2400 WATT INVERTER/CHARGER

2X VICTRON ORION 30 AMP DC-DC CHARGERS (NON-ISOLATED)



Orion-Tr Smart 12 112 - 30 Non-isolated DC/DC charger

LITTELFUSE POWER DISTRIBUTION MODULES (04980933.X)



DC-DC CHARGING INPUTS

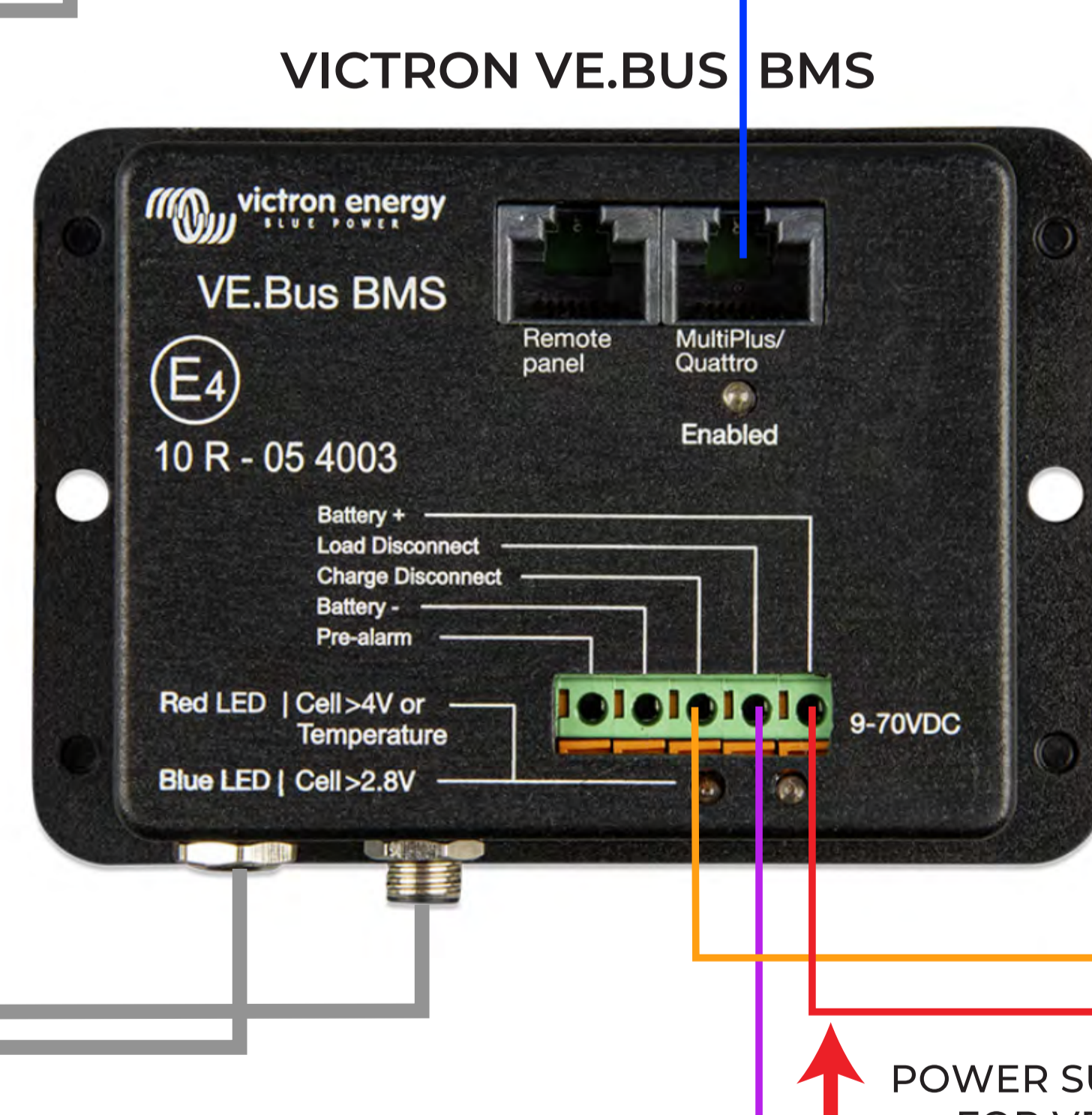
DC-DC CHARGING OUTPUTS



80 AMP MEGA FUSE



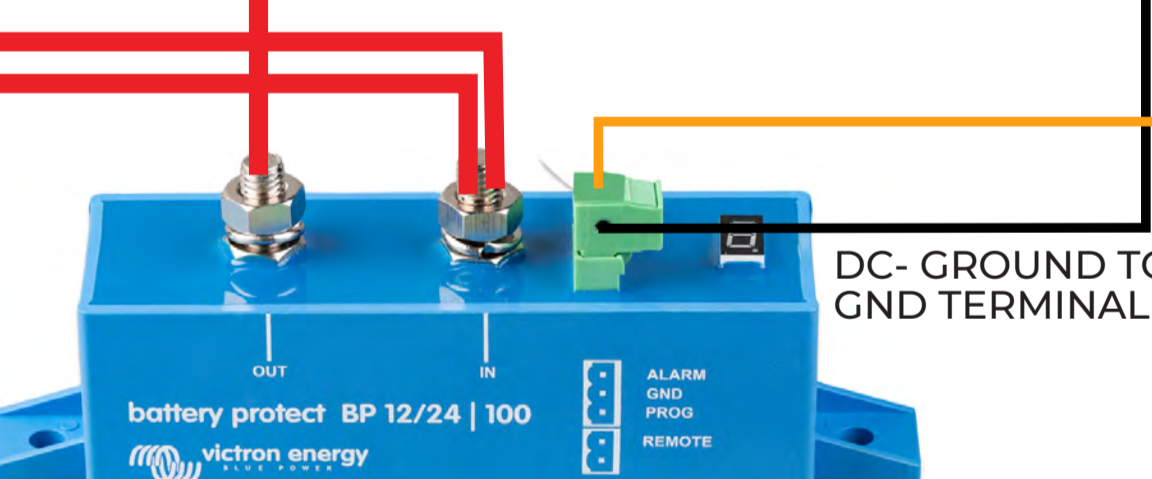
VEHICLE BATTERY



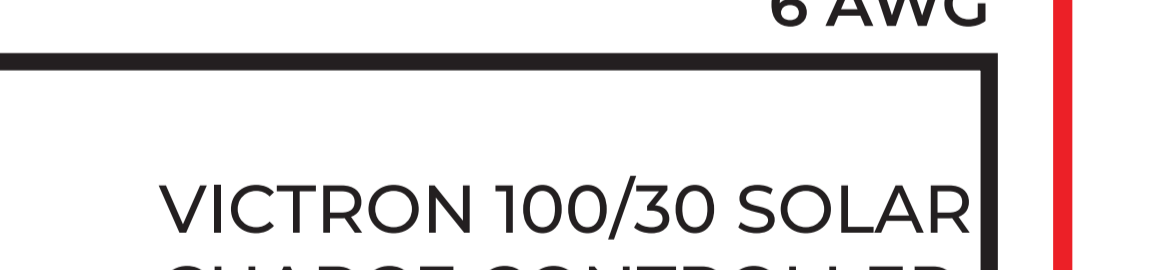
VICTRON VE.BUS BMS

NOTE: THIS CASE/CHASSIS GROUND SHOULD BE NO SMALLER THAN ONE SIZE LESS THAN THE DC SUPPLY CABLES TO THE INVERTER/CHARGER. SO THAT'S 4/0 AWG IN THIS EXAMPLE DIAGRAM.

VICTRON SMART BATTERYPROTECT (100 AMP) (CHARGING)



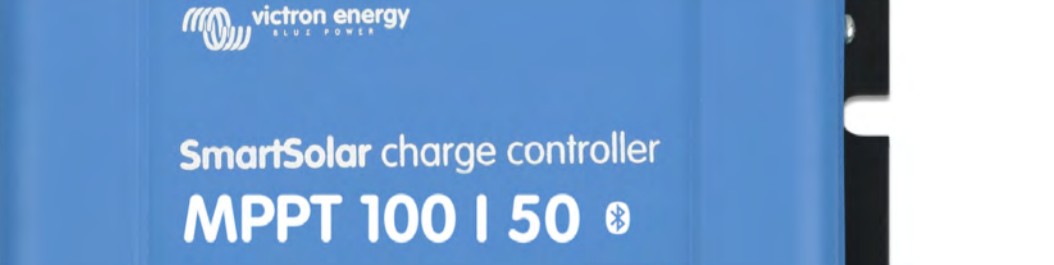
VICTRON SMART BATTERYPROTECT (100 AMP) (LOADS)



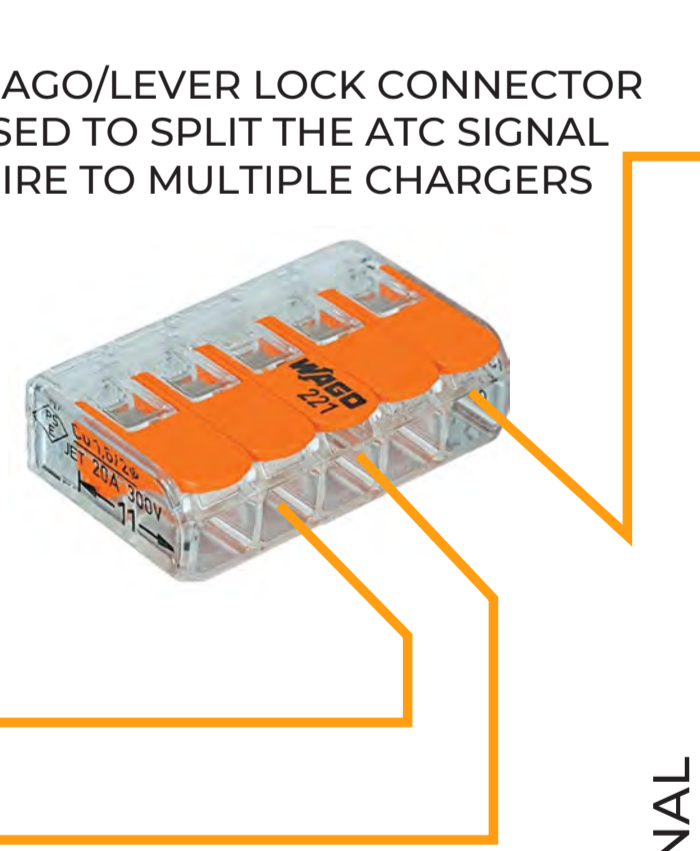
VICTRON 100/30 SOLAR CHARGE CONTROLLER



VICTRON 100/50 SOLAR CHARGE CONTROLLER



SOLAR ARRAY DISCONNECT SWITCHES, TYPICALLY INSTALLED INTO A BOX WITH A "PIN RAIL".



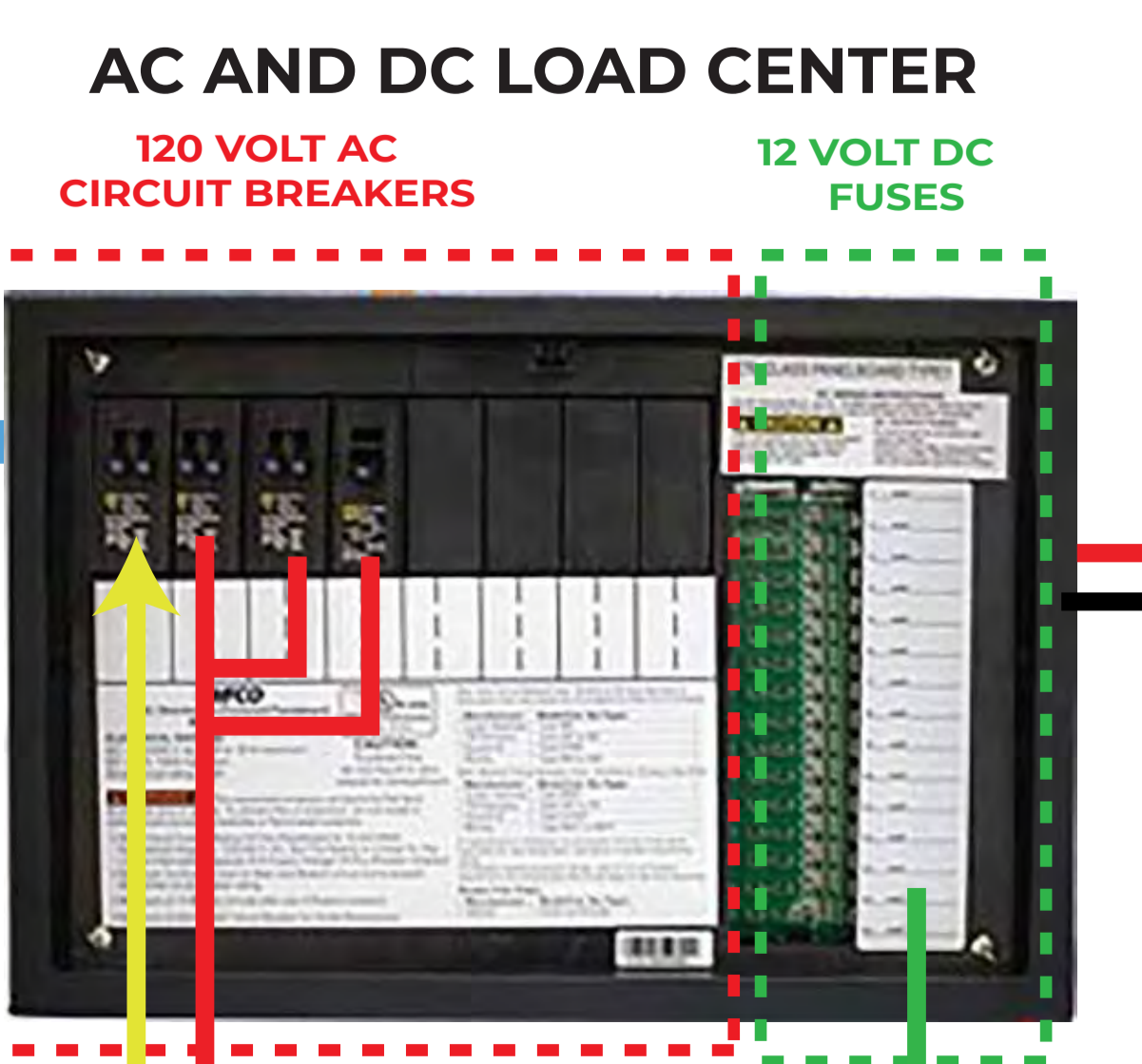
WAGO/LEVER LOCK CONNECTOR USED TO SPLIT THE ATC SIGNAL WIRE TO MULTIPLE CHARGERS

2x 60 WATT RICH SOLAR PANELS WIRED IN SERIES



WHY TWO SOLAR CHARGE CONTROLLERS?
Generally speaking you shouldn't mix solar panels of varying characteristics on the same array. If you have different types of panels, it's best to wire them to different/distinct solar charge controllers.

10 AWG WIRE WITH MC4 CONNECTORS ROUTED THROUGH ROOF WITH AN "ENTRY GLAND"



AC AND DC LOAD CENTER

50 AMP MAIN BREAKER

15 OR 20 AMP 120VAC BRANCH CIRCUITS

12VDC FUSES TO BRANCH CIRCUITS